

CLAIMS

What is claimed is:

5 1. A chip with measuring reliability, comprising:

 a substrate having a first section and a second section, an operational electrode and a counterpart electrode spaced-apart each other formed on said first section, a resistor connected with said operational electrode in series, and a first terminal and a second terminal formed on said second section; wherein said operational electrode and said counterpart electrode constitute a resistor R_s , and the resistance of said resistor connected with said operational electrode in series is equal to a maximum resistance of said resistor R_s , said operational electrode and said counterpart electrode respectively electrically connect to said first terminal and said second terminal, and said first terminal and said second terminal electrically connect to a main detecting unit of a biosensor, said main detecting unit is used for detecting a response current passing through said operational electrode, said response current is generated in response to a specific component of a specimen applied on said chip;

 a reaction layer placed above said first section of said substrate for covering said operational electrode and said counterpart electrode, said reaction layer including a redox mediator and an enzyme, said redox mediator and said specific component of said specimen applied on said chip proceeding an electrochemical reaction under catalysis of said enzyme;

 a spacer placed above said reaction layer, said spacer having a passage formed in an end thereof corresponding to said reaction layer;

and

a cover placed above said spacer, said cover having an opening over said passage of said spacer in order for said specimen sucked into said reaction layer through said opening and said passage.

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2. The chip of claim 1, wherein said operational electrode and said counterpart electrode have the same conductive material.

3. The chip of claim 1, wherein said specific component of said
10 specimen to be detected depends on said enzyme of said reaction layer.

4. The chip of claim 3, wherein said chip is used for detecting a glucose concentration of a blood sample.

15 5. The chip of claim 3, wherein said chip is used for detecting a lactic acid concentration of saliva.

6. A chip with measuring reliability, comprising:

a substrate having a first section and a second section, a bent
20 strip-like operational electrode and a bent strip-like counterpart electrode spaced-apart each other formed on said first section, and a first terminal and a second terminal formed on said second section; wherein said operational electrode and said counterpart electrode respectively electrically connect to said first terminal and said second
25 terminal, and said first terminal and said second terminal electrically connect to a main detecting unit of a biosensor, said main detecting unit is used for detecting a response current passing through said operational electrode, said response current is generated in response to

a specific component of a specimen applied on said chip;

a reaction layer placed above said first section of said substrate for covering said operational electrode and said counterpart electrode, said reaction layer including a redox mediator and an enzyme, said redox mediator and said specific component of said specimen applied on said chip proceeding an electrochemical reaction under catalysis of said enzyme;

a spacer placed above said reaction layer, said spacer having a passage formed in an end thereof corresponding to said reaction layer;

and

a cover placed above said spacer, said cover having an opening over said passage of said spacer in order for said specimen sucked into said reaction layer through said opening and said passage.

7. The chip of claim 6, wherein said operational electrode and said counterpart electrode have the same conductive material.

8. The chip of claim 6, wherein said specific component of said specimen to be detected depends on said enzyme of said reaction layer.

9. The chip of claim 8, wherein said chip is used for detecting a glucose concentration of a blood sample.

10. The chip of claim 8, wherein said chip is used for detecting a lactic acid concentration of saliva.

11. A chip substrate with measuring reliability, comprising:
a substrate base having a first section and a second section, an

operational electrode and a counterpart electrode spaced-apart each other formed on said first section, a resistor connected with said operational electrode in series, and a first terminal and a second terminal formed on said second section; wherein said operational
5 electrode and said counterpart electrode constitute a resistor R_s , the resistance of said resistor connected with said operational electrode in series is equal to a maximum resistance of said resistor R_s , and said operational electrode and said counterpart electrode respectively electrically connect to said first terminal and said second terminal.

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12. A chip substrate with measuring reliability, comprising:

a substrate base having a first section and a second section, a bent strip-like operational electrode and a bent strip-like counterpart electrode spaced-apart each other formed on said first section, and a
15 first terminal and a second terminal formed on said second section, said bent strip-like operational electrode and said bent strip-like counterpart electrode respectively electrically connect to said first terminal and said second terminal.

20 13. A method for improving measuring reliability of a chip, comprising:

providing a chip including a substrate having a first section and a second section, a strip-like operational electrode and a strip-like counterpart electrode spaced-apart each other formed on said first
25 section, said strip-like operational electrode and said strip-like counterpart electrode constitute a resistor R_s , a first terminal and a second terminal formed on said second section, said operational electrode and said counterpart electrode respectively electrically

connecting to said first terminal and said second terminal, and said first terminal and said second terminal electrically connecting to a main detecting unit of a biosensor in order for detecting a response current passing through said strip-like operational electrode, said response
5 current generated in response to a specific component of a specimen applied on said chip; and

serially connecting a resistor to said resistor R_s constituted by said strip-like operational electrode and said strip-like counterpart electrode, said resistor having a resistance equal to a maximum resistance of said
10 resistor R_s .

14. The method of claim 13, wherein extending a longitudinal dimension of each of said strip-like operational electrode and said strip-like counterpart electrode so as to serially connect said resistor to
15 said resistor R_s .

15. The method of claim 14, wherein the step for extending the longitudinal dimension of each of said strip-like operational electrode and said strip-like counterpart electrode includes making said strip-like
20 operational electrode and said strip-like counterpart electrode becoming bent strip-like electrodes.

16. The method of claim 13, wherein widening said strip-like operational electrode and said strip-like counterpart electrode so as to
25 serially connect said resistor to said resistor R_s .

17. The method of claim 13, wherein said resistor is serially connected to said strip-like operational electrode.